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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,886	07/30/2003	Arthur R. Alexander	11279 (NCR.0111US)	7940

7590 05/19/2006

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EXAMINER

DINH, TUAN T

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,886

Applicant(s)

ALEXANDER ET AL.

Examiner

Tuan T. Dinh

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-17 and 20-37 is/are pending in the application.
- 4a) Of the above claim(s) 2-14, 20-24 and 26-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Sunahara (U.S. Patent 6,153,290).

As to claim 15, Sunahara discloses a circuit board (1, column 5, line 31) as shown in figures 1-4 comprising:

first and second reference plane layers (17, 14, column 5, lines 35-36);

a dielectric layer (3-7, column 5, lines 31-32) between the first and second reference plane layers (17, 14); a decoupling capacitor (10, column 5, line 33) having first and second electrodes (22, 23, column 5, line 56); and

a discrete resistive (12, column 5, line 34) having first and second electrodes, the first electrode being electrically connected to the first reference plane layer (17), the second electrode being electrically connected to the first electrode (22) of the capacitor

(10), and the second electrode (23) of the capacitor (10) being electrically connected to the second reference plane layer (14).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sunahara (U.S. Patent 6,153,290) in view of Chakravorty (U.S. Patent 6,611,419)

As to claim 25, Sunahara discloses all of the limitations of the claimed invention as claimed in claim 15, except for the circuit board having an IC device mounted on.

Chakravorty teaches an electronic assembly comprising a multilayer substrate (210), see figure 2, having a IC die (200) mounted on.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an IC mounted on a circuit board, as taught by Chakravorty, employed into circuit board of Sunahara in order to provide a functionally electrical interconnection of components and a circuit board.

Response to Arguments

5. Applicant's arguments filed 02/21/06 have been fully considered but they are not persuasive.

Applicant argues:

In claim 15, the rejection under 102(e) is not proper because:

(a) Sunahara ('290) does not disclose "a discrete resistor having first and second electrodes" and (b) "a thick film resistor" of Sunahara is not "a discrete resistor" and do not have electrodes as required by applicant.

Upon carefully review, examiner disagrees. The discrete resistor is made by a thick/thin film resistor as taught in so many issued Patents, for example, Petty (U.S. Patent 3,749,971) discloses a discrete resistor is formed by way of a thick film resistor, Riley (U.S. Patent 5,652,562) discloses a thick film resistor (58) being a discrete resistor.

Thus, It is clearly defined a thick film resistor as a discrete resistor in so many issued Patents from the past, and Sunahara discloses a thick film resistor (12) otherwise inherently is a discrete resistor. Further the discrete resistor has electrodes of the discrete resistor functioning as terminals or contacts for used to making contact to other. Sunahara discloses in figure 2 that the resistor (12) having two terminals connected to an electrode of a capacitor (10) and a plane layer as shown in figures 1-2 is discrete because it is a distinct part and separate resistor, therefore, it is discrete and the references show that the discrete resistor is a thick film resistor.

Hence, the rejection is proper.

In claim 25, the rejection under 103(a) is not proper because:

(III) Neither Sunahara nor Chakravorty teach or suggest "a discrete resistor having first and second electrode."

Examiner disagrees because as explained above, Sunahara clearly discloses a thick film resistor as a discrete resistor.

Thus, the rejection is proper.

Conclusion

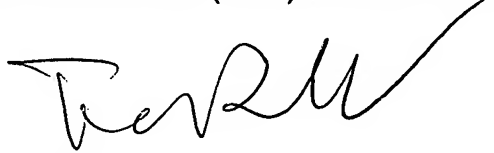
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Dinh whose telephone number is 571-272-1929. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tuan Dinh', with a long, sweeping horizontal stroke extending to the right.

Tuan Dinh
May 2, 2006.